

Elementary School Teachers' Beliefs About Teaching Environmental Education

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EXECUTIVE SUMMARY AND REFERENCES

Executive Summary

A qualitative study of elementary school teachers trained in environmental education (EE) was conducted to determine their beliefs about teaching EE. All teachers had received some training in EE and taught grades 4, 5, or 6 in an elementary school setting. The final sample consisted of 172 teachers from across the United States. The semi-structured questionnaire assessed attitudes, beliefs, normative beliefs, and behaviors using close-ended and open-ended items to elicit perceptions of teaching EE in the teachers' own words. The goal was to identify strategies trained teachers used to overcome barriers they may have met in trying to use their training and to teach EE in their classrooms. This report presents results and discusses implications for strategies to help teachers who are already teaching EE to teach more and to help encourage new teachers to begin teaching EE. This executive summary presents some key findings and recommendations.

- The results document a number of *benefits to students* teachers believe might come about as a result of teaching EE. Elementary school teachers who have been trained in the use of EE methods and techniques view teaching EE not only as a way to teach about the environment, but also as an innovative way to achieve basic educational goals like reading, writing, and mathematics, and to improve student skills. These benefits to students could be used to encourage teachers to participate in training or could be discussed during training to help teachers take what they have learned and apply it in classrooms. In addition, making such benefits known to principals, school administrators, parents, local businesses, and the community would help create a favorable and supportive climate for teaching EE.
- While all teachers saw the benefits of teaching EE, for some teachers perceived disadvantages may become barriers. In response, most teachers have developed *successful approaches to overcoming potential barriers*. Activities and materials based on these successful approaches could be developed; EE training could be enhanced with sessions to build skills in overcoming barriers. After training, networks of trained teachers could be developed to promote the sharing of new approaches to overcoming barriers.

- Several results point to *social norms and expectations from others* as factors influencing whether teachers teach EE. Principals, other teachers, parents, businesses, and the community were all mentioned as sources of social influence. Teachers who have learned to gain the support of these individuals and groups teach more and are more likely to intend to teach EE. These successful experiences for building positive social support could be used to facilitate teaching EE. Time during training could be devoted to activities to gain support of important others; after training, training organizations and other teachers could help teachers as they try to apply what they have learned in their own classrooms. In addition, workshops on EE for principals and for parents would help reinforce the school as an appropriate setting for EE instruction.
- Results show that those who have stronger intentions to teach in the upcoming year have received more training, overall, and in many specific EE methods and techniques, and are more comfortable with EE methods and techniques. Thus, the strategy of *training teachers* in EE through workshops and courses, a strategy which is already being used by a number of training organizations, should be continued. This strategy is valuable not only to bring new teachers into teaching EE, but to help those already teaching teach even more and with higher quality.
- The results on how teachers find out about EE suggest that current communication channels are working. They also suggest some new channels that could be used. *Word-of-mouth* from other teachers, the principal, and other school administrative staff would be effective channels.
- Lack of *materials* was the most frequently mentioned barrier to teaching EE education. Again, consistent with current efforts, developing, disseminating, and training teachers in the use of EE curriculum and supplementary materials needs to be continued.
- Most of the time spent teaching EE is spent during science class. EE needs to move beyond the science discipline into other areas like *social science and health*. The content of training and materials could be assessed to determine if applications to social science and health are adequate and how they might be improved.
- While teachers are pivotal players, the field would do well to consider *strategies beyond teacher training* to bring in voices other than teachers and to make structural and policy changes. Teachers believe that policies supportive of EE are essential to their success in the classroom. Organizations committed to the environment and EE and training could play a role in facilitating a positive climate for EE in schools.

Much progress has been made in developing materials and in training elementary school teachers to teach EE, an effort which has helped teachers teach EE better. This study has identified the beliefs teachers hold about teaching EE, the benefits they see to students, and their successful approaches to overcoming potential barriers. Based on these findings, this report has made some recommendations to facilitate the teaching of EE. Dialog about ways to apply these findings which reviews these suggestions to develop feasible and practical strategies is a critical

next step. Finally, continued cooperation among environmental educators, teachers, principals, and other school administrators is needed to document the educational benefits of EE, to make these benefits known more broadly, and to support the teaching of EE in our nation's schools.

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